

(12) **United States Patent**
Teets et al.

(54) **ELECTRICITY GENERATING SYSTEM
HAVING AN ANNULAR COMBUSTOR**

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(56) **References Cited**

U.S. PATENT DOCUMENTS

Re. 34,962 6/1995 Shekleton et al. 60/39.36

(10) Patent No.: **US 6,314,717 B1**
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| | | | |
|-----------|---------|-------------------|-----------|
| 3,187,188 | 6/1965 | Adkins et al. | |
| 3,247,393 | 4/1966 | Toesca | |
| 3,613,360 | 10/1971 | Howes | 60/39.36 |
| 4,486,147 | 12/1984 | Byrne et al. | |
| 4,619,588 | 10/1986 | Moore, III | 417/366 |
| 5,129,222 | 7/1992 | Lampe et al. | |
| 5,140,807 | 8/1992 | Shekleton et al. | 60/39.36 |
| 5,180,034 | 1/1993 | Lopes | 60/39.08 |
| 5,237,817 | 8/1993 | Bornemisza et al. | 60/226.1 |
| 5,497,615 | 3/1996 | Noe et al. | 60/39.511 |
| 5,685,156 | 11/1997 | Willis et al. | 60/39.511 |

FOREIGN PATENT DOCUMENTS

0742634 11/1996 (EP)

06173714 6/1994 (JP)

* cited by examiner

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(57) **ABSTRACT**

An electricity generating system having a body (159), an annular combustor (14), a turbine (16), a compressor chamber and a compressor (102) positioned within the compressor chamber. An inlet port is in fluid communication with the compressor chamber and an exit port is in fluid communication with the turbine. A plurality of magnets (MG) is secured to the rotor (18) and a stator (22) made of magnetically attracted material, such as iron, and having a stator winding provided in the body (159). The stator winding is positioned in close proximity to the plurality of magnets mounted to the rotor whereby rotation of the rotor (18) induces a current in the winding.

18 Claims, 15 Drawing Sheets